Montana Fish, Wildlife & Parks

3201 Spurgin Road
Missoula, MT 59801
March 26, 1997

Governor's Office, Attn: Julie Lapeyre
Environmental Quality Council
Dept. of Environmental Quality, POB 200901, Helena, MT 59620-0901
Montana Fish, Wildlife & Parks
Fisheries Division
Region 2
Endangered Species Coordinator
State Hist. Pres. Off., POB 201202, Helena, MT 50620-1202
MT State Lib., POB 201800, Helena, MT 59620-1800
MT Environmental Information Center, POB 1184, Helena, MT 59624
MT Audubon Council, POB 595, Helena, MT 59624
North Powell Conservation District, 91 North Frontage Road, Deer Lodge, MT 59722
Environmental Protection Agency, Federal Building, Helena, MT 59601
Army Corps of Engineers, 301 South Park Ave., Helena, MT 59601
U.S. Fish & Wildlife Service, 100 No. Park Ave., Helena, MT 59601
Western Montana "Fish & Game Assn. Box 4294, Missoula, MT 59806
Missoula Wildlife Assoc., 401 Burlington, Missoula, MT 59801
Big Blackfoot Chapter of T.U., POB 9237, Helena, MT 59639

Dear Ladies and Gentlemen:

The enclosed Environmental Assessment (EA) is submitted for your consideration. It was prepared for the proposed Future Fisheries Improvement project on Chamberlain Creek. This project includes the construction of a new irrigation diversion with an attached fish ladder. Additionally, the riparian will be improved in this immediate vicinity. This project should assist in restoring better recruitment to the main-stem river. This work should provide critical spawning passage for cutthroat trout.

Questions and comments will be accepted until 5 p.m. May 1, 1997. If you have questions, feel free to contact me at (406) 444-2432. All comments should be sent to the undersigned.

Thank you for your interest.

Sincerely,
Ron Pierce

Ron Pierce
Fisheries
Region 2

Powell

CHAMBERLAIN CREEK EA CHECKLIST

PART I. PROPOSED ACTION DESCRIPTION

1. Type of Proposed State Action Fish passage and habitat restoration
2. Agency Authority for the Proposed Action Montana Fish, Wildlife and Parks
3. Name of Project Chamberlain Creek Fish Passage and Riparian Restoration Project

4. Name, Address and Phone Number of Project Sponsor (if other than the agency)
   Ron Pierce, 3201 Spurgin Rd. Missoula, MT. 59802 542-5532

5. If Applicable:

   Estimated Construction/Commencement Date August 1st 1997
   Estimated Completion Date September 1st 1997
   Current Status of Project Design (% complete) 90 %

6. Location Affected by Proposed Action (county, range and township)
   Powell County, T15N, R13W,Sec.32, Stream mile 0.1 to 0.2

7. Project Size: Estimate the number of acres that would be directly affected that are currently:

   (a) Developed:
   residential...0 acres
   industrial.....0 acres

   (b) Open Space/Woodlands/
   Recreation....0 acres

   © Wetlands/Riparian
   Areas.....0.2acres

   (d) Floodplain...0.2 acres

   (e) Productive:
   irrigated cropland...0 acres
   dry cropland.....0 acres
   forestry.....0 acres
   rangeland.....0.5 acres
   other.....____ acres

8. Map/site plan: enclosed

9. Narrative Summary of the Proposed Action or Project including the Benefits and Purpose of the Proposed Action.

Background

Chamberlain Creek, a tributary to the middle Blackfoot River located in Powell County, flows for approximately 10 miles in a northly direction to it's confluence with the Blackfoot River at river mile 43.9. Stream discharge was 2.1 cfs in September, 1989.

This project will improve fish passage barrier in Chamberlain Creek and restore habitat to a 200 foot section of stream. The principle component to the project is a new diversion structure. A small amount of instream habitat enhancment work will be completed. This project is a coopertative fishery restoration effort between the Heart-Bar-Heart Ranch, the Knob-and-Kettle Ranch, the US Fish and Wildlife Service and Montana Fish, Wildlife and Parks.

Chamberlain Creek supported bull trout as recently as the 1970's. Chamberlain Creek has an excellent population of westslope cutthroat trout in lower to middle reaches; however, the lower-most ½ mile of Chamberlain creek located on the Knob-and-Kettle Ranch has fish migration, habitat and stream flow problems. These problems limit resident fish densities, cutthroat recruitment to the Blackfoot River and movment of fish within the system during base flow periods.

Several Chamberlain Creek fishery/riparian improvement projects have been completed to date. Complete projects include consolidation of irrigation ditches, converting flood to sprinker irrigation, riparian grazing managment improvments, erosion control measures, wetland restoration, improved fish passage, habitat enhancement on 1 mile of Chamberlain Creek, restoration of lower Pearson Creeek, and securing instream flows in both Pearson and Chamberlain Creeks. In 1996, the Heart-Bar-Heart Ranch donated a water lease for instream flwo puposes on hamberlan Creek and Pearson Creek. The Chamberlain creekw ater lease equates to 50% of the total Chamberlain Creek discharge during the irrigation season. Instream flows combined with the project outlined in this EA, will supplement the restoration effort on Chamberlain Creek.

The diversion project will specifically address the last man-caused fish migration barrier on lower Chamberlain Creek. A new "fish-friendly" diversion structure will accomplish three objective: 1) eleiminate the human relatee fish passage barrier to Chamberlain Creek; 2) provide for better managment of diverted water to the Knob-and-Kettle Ranch; and 3) provide 2 gaging station on Chamberlain Creek that will allow the Heart-Bar-Heart Ranch, Knob-and-Kettle Ranch and Montan Fish, Wildlife and Parks the means to monitor the water lease. The habitat improvement project will supplement the restoration effort by restoring high quality habitat in a section of stream that has been altered by machinery and livestock useage.

Project Benefits

The high potential for developing a cutthroat trout run in Chamberlain Creek from the Blackfoot River are especially important in this reach of the river because of poor survival of juvenile rainbow and brown trout identified here. Cutthroat are expected to better adapt to the winter conditions in this reach of the Blackfoot River and greatly improve fish densities.

Fishery restoration of Chamberlain Creek would have both on-site and off-site benefits.

On-site benefits would include: (1) greatly improved fish habitat which would improve fishing opportunities for more and larger fish; 2) improved water managent in irrigation canals. Off-site benefits to the public would include: (1) improved recruitment of native fish species to the Blackfoot River; (2) increased opportunity to catch native fish like cutthroat in the Blackfoot River; (3) increase in the biodiversity of the Blackfoot River fish populations; (4) increased number of cutthroat would benefit less skilled anglers because of greater catchability; (5) insure that tributary water quality would not further degrade Blackfoot River water quality; (6) may reduce the need for more extreme native fish species management measures for their maintenance in the future and maintenance of angling opportunity; (7) improved availability of pools will increase over-wintering survival of rearing fish especially cutthroat trout (necessary component of their winter habitat).

Project Objectives

To restore this system back to it's potential requires removing man-made fish passage barriers, restore fish habitat (including flows) to the stream channel, install riparian livestock management measurers.

All project elements will be constructed to blend with the natural surroundings to the fullest extent possible. Our goal in this restoration project is to make our intrusion in this riparian area undetectable after a short recovery period. Planning and supervision of the project will be undertaken by Ron Pierce of the Montana Department of Fish, Wildlife and Parks and Greg Neudecker with the US Fish and Wildlife Service. This project plan was developed in consultation with the Heart-Bar-Heart and Knob-and-Kettle Ranches.

Fish passage problems near the mouth

The project will remove the use of hay bails and fence posts for an irrigations structure, and will replace them with a concrete irrigaton structure fitted with an fish ladder (see enclosed diagram).

Habitat restoration

Fish habitat improvements in Chamberlain Creek will focus in a 200 foot section of stream lacking in pool development. A combination of woody debris, habitat rocks, and upstream "V" checkdams will be used as fish habitat enhancement measures (Figure 3). Disturbed sites will be seeded with grasses and shrubs planted upon completion of excavation to stabilize soils. Six pools will be added in the habitat improvement area.

Permitting

The Montana Fish, Wildlife and Parks will obtain an SPA 124 permits prior to proceeding with the project.

Project Scheduling

The entire project is expected to require 1 week for completion . All project construction related to the stream channel work will be completed under the direct supervision of a fisheries biologist in consultation with a stream hydrologist. Summer 1997 is the most likely starting time for construction.

Project Costs

1) Fish passage problems near the mouth
Installing a concrete diversion structure with fish ladder.....$ 9,460.00

2)Fish habitat improvement including: placement of woody debris, boulders, shrubs and trees, labor and equipment .....$ 7,000.00

In-kind services: fencing, materials, labor and equipment.....$ 5,000.00

Project Funding

Montana Fish, Wildlife and Parks.....	$9,460.00
US Fish and Wildlife Service.....	$7,000.00
Knob-and Kettle Ranch (In-kind).....	$5,000.00
Total	$21,460.00

Project Schedule

1997

Activity	April	May	June	July	Aug
permits SPA, MEPA	X	X	X		
stream construction			X	X	X

(high water, owners, contractors availability other factors may influence starting time)

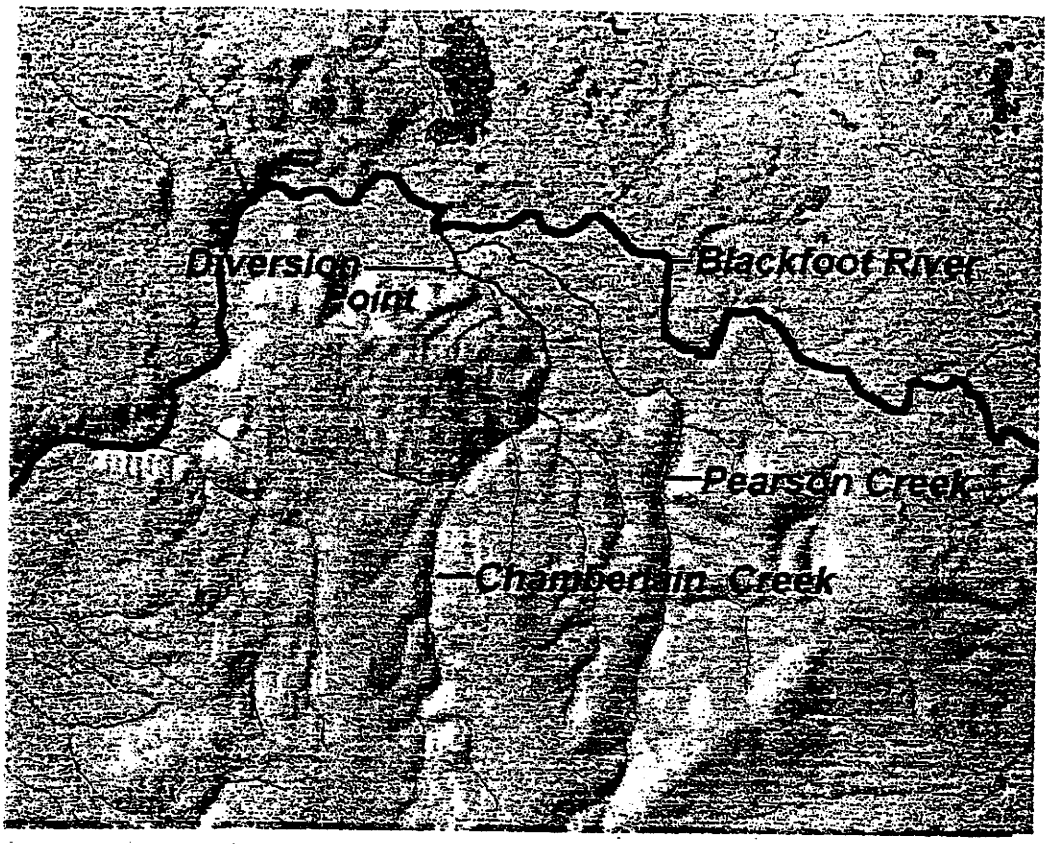


Figure 1. Project Location Map

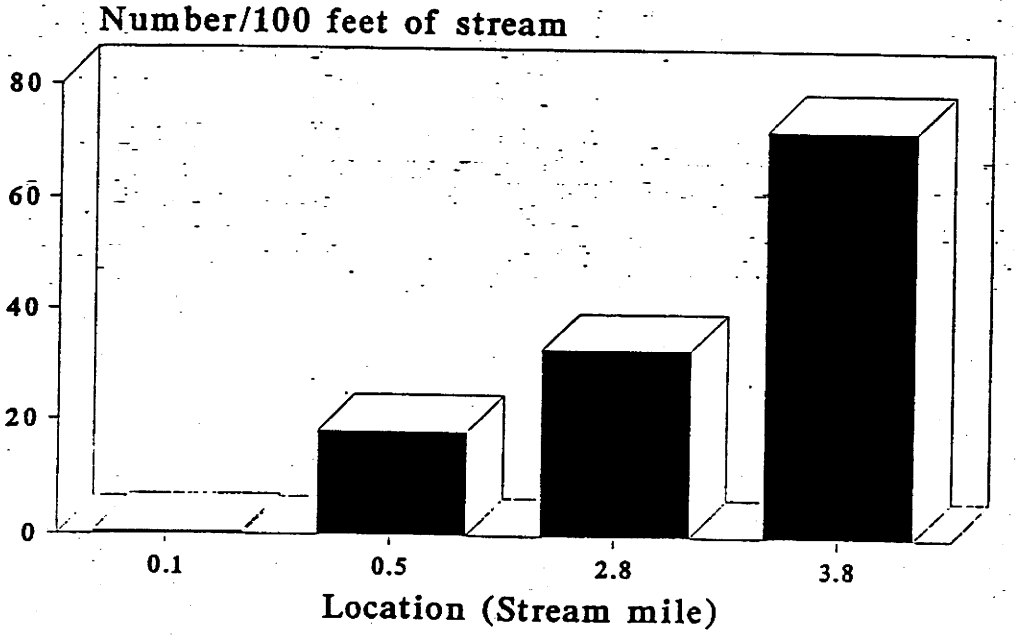


Figure 2. Relative abundance for cutthroat trout in lower Chamberlain Creek show a sharp downstream decline in the project area.

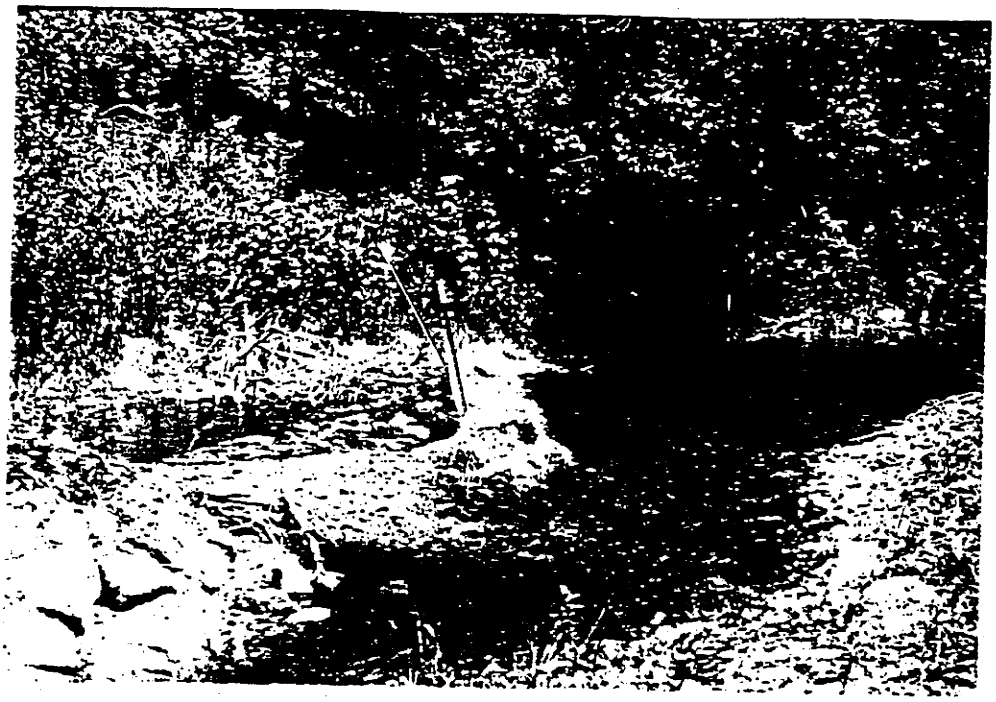


Figure 3. The water lease will pass 50% of the stream flow downstream of this diversion. The new diversion will improve fish passage at this site

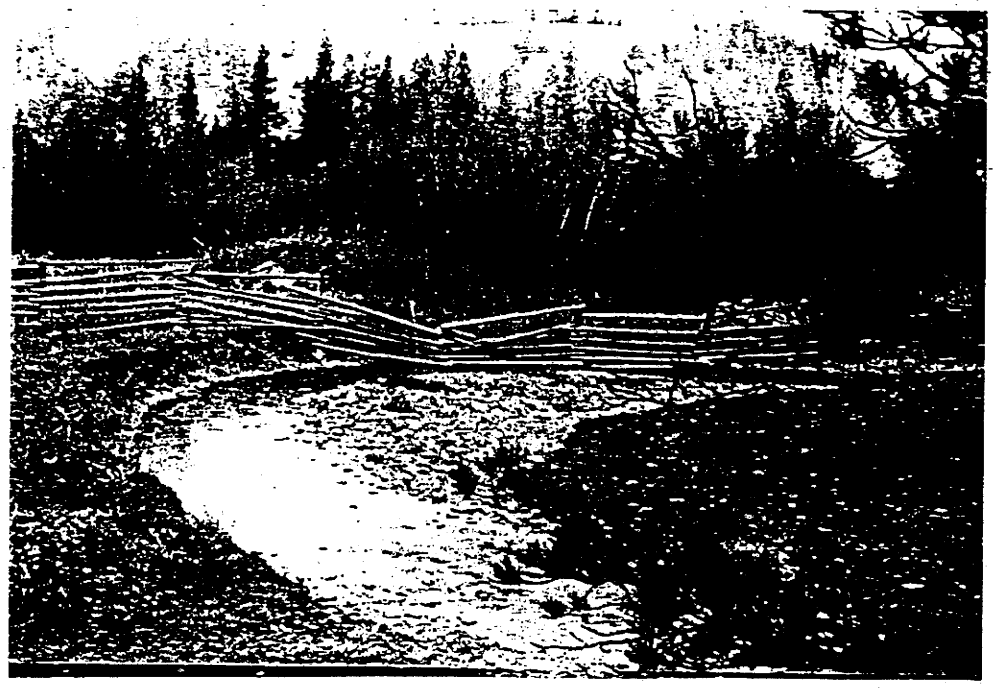
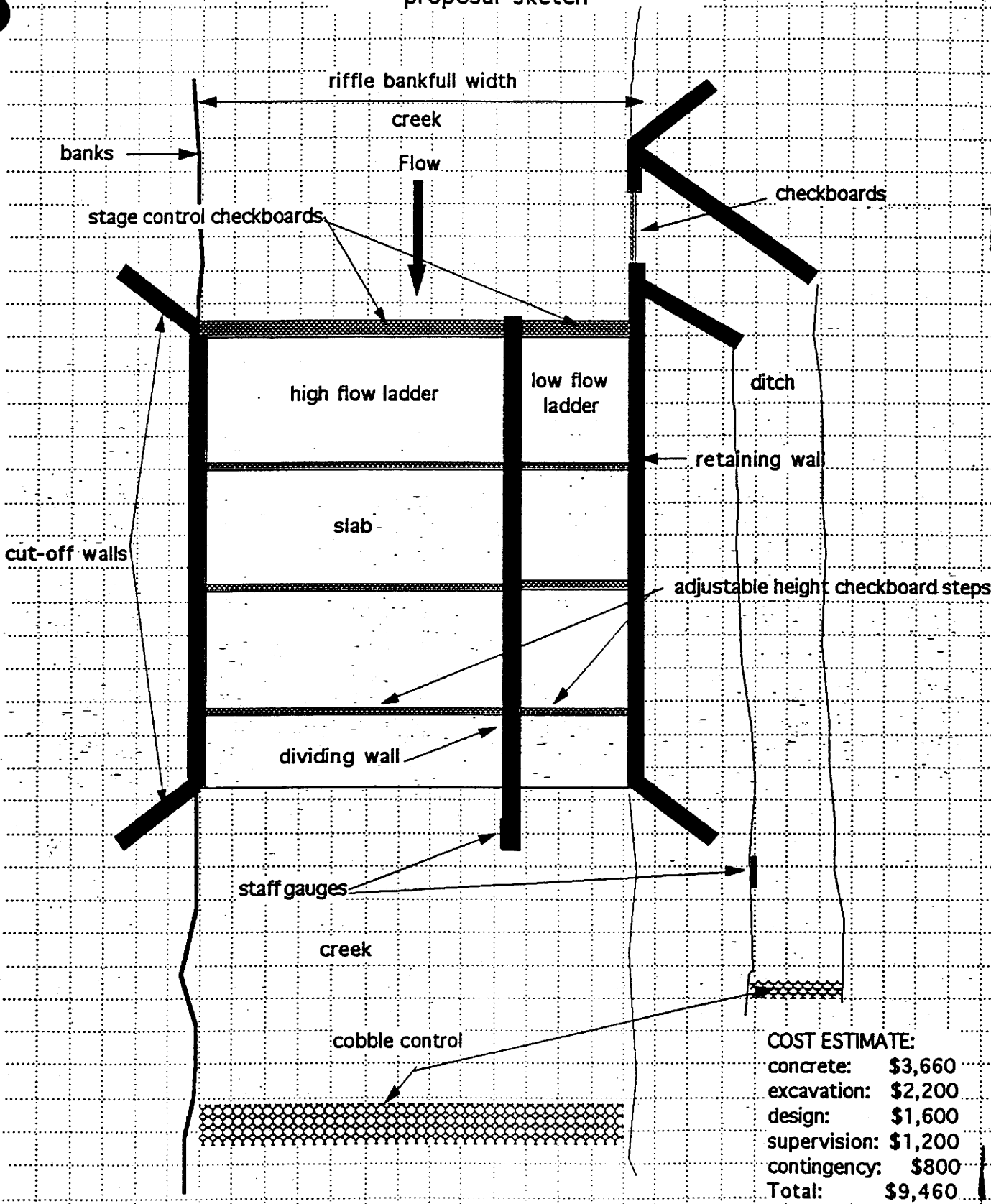


Figure 4. Riparian management and poor stream habitat on the Knob-and-Kettle Ranch will be improved as part of this cooperative effort.

To: Ron Pierce, MT Fish, Wildlife & Parks
From: Igor Suchomel, Watershed Consulting

Exact dimensions to be determined after a survey. Wall height will be slightly above bankfull stage.

CHAMBERLAIN CREEK DIVERSION
proposal sketch



COST ESTIMATE:

concrete:	$3,660
excavation:	$2,200
design:	$1,600
supervision:	$1,200
contingency:	$800
Total:	$9,460

PART II. ENVIRONMENTAL REVIEW

Evaluation of the Impacts of the Proposed Action Including Secondary and Cumulative Impacts on the Physical and Human Environment. Complete the following checklist, adding comments or narrative as necessary.

IMPACTS

PHYSICAL ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
1. LAND RESOURCES						
Will the proposed action result in:						
a. Soil instability or changes in geologic substructure?		X				
b. Disruption, displace-ment, erosion, compac-tion, moisture loss, or over-covering of soil which would reduce productivity or fertility?		X				
c. Destruction, covering or modification of any unique geologic or physical features?		X				
Changes in siltation, position or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?			X			X
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?						
f. Other: _____						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

d. A temporary increase in stream turbidity will occur during project implementation.

IMPACTS

PHYSICAL ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
2. AIR						
Will the proposed action result in:						
a. Emission of air pollutants or deterioration of ambient air quality? (also see 13 (c))		X				
b. Creation of objectionable odors?		X				
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. *For P-R/D-J projects, will the project result in any discharge which will conflict with federal or state air quality regs? (Also see 2a)						
f. Other _____						

PHYSICAL ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX

3. WATER 'ill the proposed action sult in:						
a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?			X			X
b. Changes in drainage patterns or the rate and amount of surface runoff?						
c. Alteration of the course or magnitude of flood water or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?		X				
Effects on any isting water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or ground-water quality?		X				
k. Effects on other?						

a) temporary increase in stream turbidity during project implementation.

IMPACTS

.IYSICAL ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
4. VEGETATION						
Will the proposed action result in:						
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?		X				X
b. Alteration of a plant community?		X				X
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				X
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?		X				
f **For P-R/D-J, will the ›ject affect wetlands, or .ıme and unique farmland?						
g. Other: _____						

a)This project will improve diversity, productivity and abundance of plant species.

d)A rest-rotation grazing system and offstream watering has been implemented and will improve range productivity.

e)Disturbed sites will be immediately seeded with a competitive native grass mixture.

IMPACTS

HYSICAL ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
5. FISH/WILDLIFE Will the proposed action result in:						
a. Deterioration of critical fish or wildlife habitat?		X				X
b. Changes in the diversity or abundance of game animals or bird species?		X				
c. Changes in the diversity or abundance of nongame species?						
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				
g. Increase in conditions that stress wildlife popu-lations or limit abundance (including harassment, legal or illegal harvest or other human activity)?		X				
h. **For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f)						
I. *For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d)						
j. Other: _____						

This project will is a habitat enhancement project and will benefit "species of special concern"

IMPACTS

HUMAN ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
6. NOISE/ELECTRICAL EFFECTS						
Will the proposed action result in:						
a. Increases in existing noise levels?		X				
b. Exposure of people to serve or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other: _____						

IMPACTS

HUMAN ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
7. LAND USE						
Will the proposed action result in:						
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				
Other: _____						

IMPACTS

HUMAN ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
8. RISK/HEALTH HAZARDS						
Will the proposed action result in:						
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?		X				
b. Affect an existing emergency response or emergency evacuation plan or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?		X				
*For P-R/D-J, will any chemical toxicants be used? (Also see 8a)						
e. Other: _____						

IMPACTS

HUMAN ENVIRONMENT	UNKNOWN	NO IMPACTS	IMPACTS: MINOR	IMPACTS: POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED	COMMENT INDEX
9. COMMUNITY IMPACTS						
Will the proposed action result in:						
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				
f. Other: _____						

IMPACTS

HUMAN ENVIRONMENT	UNKNOWN	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED	COMMENT INDEX
10. PUBLIC SERVICES/ TAXES/UTILITIES Will the proposed action result in:						
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify: _____		X				
b. Will the proposed action have an effect upon the local or state tax base and revenues?		X				
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased used of any energy source?		X				
e. Other:_____						

IMPACTS

JMAN ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
11. AESTHETICS/ RECREATION						
Will the proposed action result in:						
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?		X				
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. Alteration of the quality or quantity of recreational opportunities and settings?		X				
d. *For P-R/D-J, will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, c)						
e. Other: _____						

This project will enhance esthetic and recreational values.

IMPACTS

HUMAN ENVIRONMENT

	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
12. CULTURAL/ HISTORICAL RESOURCES						
Will the proposed action result in:						
a. Destruction or alteration of any site, structure or object of prehistoric historic, or paleological importance?		X				
b. Physical change that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				
d. ***For P-R/D-J, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a)						
Other: _____						

IMPACTS

SIGNIFICANCE CRITERIA	UNKNOWN	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED	COMMENT INDEX
13. SUMMARY EVALUATION OF SIGNIFICANCE Will the proposed action, considered as a whole:						
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on tow or more separate resources which create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects which are uncertain but extreme-ly hazardous if they were to occur?		X				
c. Potentially conflict with the substantive require-ments of any local, state, or federal w, regulation, standard or mal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial de-bate or controversy about the nature of the impacts that would be created?		X				

2. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:

a. No action alternative

This alternative would be implemented by not taking any actions on the proposed fish habitat restoration plan. The likely outcome of this alternative would be the acceptance of lost native fish species habitat, loss of improved recruitment to the Blackfoot River, loss of potential fishing opportunity on and off-site.

3. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:
The preferred alternative is an enhancement effort. Past landuse actions have disrupted migrations and production of fish species.

4. Based on the significance criteria evaluated in this EA, is an EIS required? YES / NO If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

The proposed action represents an enhancement in ecosystem components and the human environment. The positive corrective nature with minimal impacts make an EA the appropriate level of analysis.

5. Describe the level of public involvement for this project if any and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

Only limited public involvement is planned. All actions have been approved by the lessee, the Department of State Lands, Montana Fish, Wildlife and Parks, USFWS and Conservation District. This project is consistent with other restoration efforts in the Blackfoot River Basin.

6. Duration of comment period:

30 days

7. Name, title, address and phone number of the Person(s) Responsible for Preparing the EA:

Ron Pierce
Montana Fish, Wildlife and Parks
3201 Spurgin Rd.
Missoula, MT. 59801
406-542-5506